

Experiments in King's Park over three years have now succeeded in developing a technique for successful mass establishment of six to nine month old seedling trees. If planted in natural gaps in the bush canopy which have been cultivated by rotary hoe, these will survive the following summer and make good growth, without watering or attention, and even if apparently drought-tender species like *E. diversicolor* (karri) and *E. guilfoylei* (tangle) are included. Height growth and luxuriance are much improved by dressings of organic manure.

It is thought that healthy trees, therefore, can be grown in the Park bush if they are properly treated and fire-protected.

It will be necessary to continue experiments for some years, planting out groups of young tuarts, jarrah and marri, manuring and tending them, and gradually removing competition by banksia and casuarina from their vicinity. This will necessitate vigorous progressive felling of the latter, but we already know from past experience that unless this is done the eucalypts cannot be expected to make good growth. Mowing of the ground vegetation around the groups of trees will be relied on for fire protection.

## OCCURRENCES OF THE DOUBLE-BANDED DOTTEREL IN WESTERN AUSTRALIA

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The Double-banded Dotterel (*Charadrius bicinctus*) is a New Zealand breeding species which during the post-breeding period virtually deserts the South Island, and congregates on the North Island, while a considerable proportion of birds migrates across the Tasman Sea to coastal eastern Australia, Tasmania and South Australia where a small number of non-breeding birds remain during the normal nesting season (W. B. Oliver, *New Zealand Birds*, Wellington, 1955, p. 259). Some birds penetrate many miles inland in eastern Australia (J. Hobbs, *The Emu*, 61, 1961: 30; 56, 1956: 434). It also visits Lord Howe, Norfolk and the New Hebrides Islands, and on rare occasions a few wander along the south coast as far as South-western Australia (D. L. Serventy and H. M. Whittell, *Birds of Western Australia*, Perth, 1962, p. 190), where it has been observed at six localities. Because of some confusion regarding these few known occurrences in Western Australia, plus the fact that details of several specimens collected in the State have never been published, all definite sightings of the Double-banded Dotterel including a recent record are listed.

**Point Malcolm, east of Esperance.** J. T. Tunney collected three specimens—two males and one female—at Point Malcolm on June 16/17, 1906. The two males, one being in breeding plumage and the other in advanced moult into breeding plumage, are now in the American Museum of Natural History (nos. 736952/3), while the female, which is in eclipse plumage, is in the W.A. Museum (no. 8921).

**Oyster Harbour, Albany.** Two specimens in eclipse plumage collected by T. Carter on May 6/7, 1907, are in the Amer. Mus. Nat. Hist. (nos. 736960/1). There is also an eclipse-plumaged specimen (R11581) collected by J. H. Charter on June 26, 1906, in the National Museum, Melbourne, and a female eclipse-plumaged specimen (O. 15772) collected by T. Carter on May 7, 1907, in the Australian Museum, Sydney.

**Wilson's Inlet.** Two eclipse-plumaged specimens (nos. 736958/9) collected by F. L. Whitlock on March 4, 1910, are in the Amer. Mus. Nat. Hist. Whitlock (*The Emu*, 38, 1939: 442) refers to having seen one at Wilson's Inlet, while in a letter to Major H. M. Whittell he mentions that one was actually shot (K. A. Hindwood, *in litt.*). It is possible that Whitlock was actually referring to his 1910 specimens and merely relying on his memory.

**Penguin Island, Safety Bay.** Two birds in full nuptial plumage were seen at Penguin Island on August 17, 1940, by several observers (E. H. Sedgwick, *The Emu*, 46, 1946: 214).

**Pelican Point, Swan River estuary.** A bird, almost in full nuptial plumage, was observed by D. L. and V. N. Serventy at Pelican Point on May 25, 1947 (D. L. Serventy, *The Birds of the Swan River District, Western Australia*, Melbourne, 1948, p. 48). D. L. Serventy (*The Emu*, 38, 1938: 24) doubtfully recorded the species on a number of occasions in 1936, but from his remark on the "long thick bill," the birds were possibly Mongolian (*C. mongolus*) or Large Sand (*C. leschenaultii*) Dotterels. The Double-banded Dotterel has a thin bill.

**Leeman Salt Lake.** On March 30, 1964, while on a field trip with Dr. G. M. Storr, I saw a single bird which was subsequently collected at Leeman Salt Lake, two miles from the coast and 48 miles south of Dongara. The specimen (W.A. Museum, no. A9452) is a female in eclipse plumage with no evidence of moult. There is a little buff on the sides of the face and an indistinct grey band right across the breast, below which is an incomplete band either side of the breast. This occurrence is the most northern in Western Australia.

T. Carter (*The Emu*, 3, 1904: 175) lists that he collected single specimens at North-West Cape on December 7, 1898, and at Point Cloates on January 28, 1900, but these have been shown to be *C. mongolus* by G. M. Mathews (*Birds of Australia*, 3, 1913: 96) and also by K. A. Hindwood (*in litt.*) for whom the specimens, which are now in the American Museum of Natural History, were rechecked by Dean Amadon and Ernst Mayr. Specimens collected by F. L. Whitlock at Condon and Port Hedland (*The Emu*, 8, 1909: 193) and identified as *C. bicinctus* were almost certainly *C. mongolus* (K. A. Hindwood, *in litt.*); unfortunately they cannot now be traced.

I am deeply indebted to Mr. K. A. Hindwood for making available to me the results of his research on the validity of published sightings of the Double-banded Dotterel in Western Australia, together with details of Western Australian specimens in various museums.